PREPARED FOR
Mr David Houltby

SITE LOCATION
The Beeches, Halifax Road, Thurgoland, Sheffield

ARBORICULTURAL METHOD STATEMENT

March 2026

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Document Control

Version	Status	Prepared by	Review Date	Authorised by
1	FINAL	Callum Throw	07 March 2026	Callum Throw

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Document Title:	260305 ARBI 1126 AMS V1
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Site Summary

	Description	
Site Name/Address	The Beeches, Halifax Road, Thurgoland, Sheffield, S35 7AL	
Site Ordnance Survey National Grid Reference	SE 28824 01114	
Local Planning Authority	Barnsley Metropolitan Borough Council (BMBC)	
Planning Application Reference Number	2026/0016	
Planning Application Description of Works (as cited on the planning application)	Two and single storey rear extensions to dwelling.	
Statutory Constraints	Tree Preservation Order/s	Conservation Area
	Yes	No

Report Contents

Appendices

1. Introduction

1.1 Terms of instruction

1.1.1 Mr David Houltby (hereafter the 'Client') commissioned Arb Innovators Ltd ('Arb Innovators') to prepare an Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) for The Beeches, Halifax Road, Thurgoland, Sheffield, S35 7AL (hereafter referred to as the 'Site') in accordance with *BS5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations* (The British Standards Institution, 2012), hereafter 'BS5837:2012'.

1.1.2 This AMS is provided in response to comments made by Edward Jowett (Tree Officer) at Barnsley Metropolitan Borough Council and the condition recommended (Planning Application Ref: 2026/0016).

Consultation Suggested Condition (No number given)

1.1.3 *No development or other operations being undertaken on site shall take place until the following documents in accordance with British Standard 5837:2012 Trees in relation to design, demolition and construction - Recommendations have been submitted to and approved in writing by the Local Planning Authority:*

Tree protective barrier details

Tree protection plan

Arboricultural method statement

No development or other operations shall take place except in complete accordance with the approved methodologies.

***Reason:** To ensure the continued wellbeing of the trees in the interests of the amenity of the locality.*

1.2 Aims of the Arboricultural Method Statement (AMS)

1.2.1 This AMS describes the arboricultural protection measures identified as necessary for the protection of retained trees as part of the Development. It presents, in principle, the arboricultural protection measures which are appropriate to the intensity of the works, and which will be applied during demolition and construction. Reference should be made to the TPP provided at Appendix 3.

1.3 Scope of this Arboricultural Assessment

1.3.1 The information provided is compliant with BS5837:2012 (Table B.1) and national standard planning application validation requirements.

1.3.2 The scope and level of detail included within this AMS is as follows:

1. Provide an Arboricultural Method Statement (AMS) outlining how retained trees will be protected and managed during on-site demolition and construction activities.
2. Provide a detailed Tree Protection Plan/s (TPP) that illustrate details and specifications on tree protection measures.

2. Administrative Information

2.1 Development Description

2.1.1 The development description as cited on the planning application will be referred to throughout this report as the 'Development.'

2.1.2 The Development is for *'Two and single storey rear extensions to dwelling'*.

2.2 Reference Documentation

2.2.1 Table 1 outlines the documentation provided to prepare this AMS. This report should be read in conjunction with the reference materials listed.

Table 1 Reference Documents and Plans Provided

Document/Drawing Description	Reference No.	Prepared By	Date
Location and Block Plan	24001-MAD-S1-00-DR-A-00001-T01 - Location and Block Plan	Meridian Architecture	09.08.2024
GA Proposed Plans	24001-MAD-Z1-ZZ-DR-A-03001-T01 - Proposed GA Plans	Meridian Architecture	23.06.2025

2.3 Arboricultural Background

2.3.1 An Arboricultural Impact Assessment (AIA) was previously prepared by Arb Innovators (26 September 2025) and submitted as part of the planning application. This document sets out the arboricultural impacts arising from the Development and as such, this AMS does not assess the impacts and instead, is prepared specifically to discharge the pre-commencement condition imposed.

Arboricultural Walkover Survey Summary

2.3.2 A survey of trees within influencing distance (15m beyond the Site based on the surveyor's discretion) of the Development was undertaken on 29 August 2025. Full details of the trees referenced in this AMS, their condition, BS5837:2012 categories and details on the walkover tree survey methodology used, are provided at Appendix 1 and 2.

Trees to be Removed and Retained

2.3.3 2no. low quality trees (T2 and T3) along with a c. 6m section of H1 were recommended for removed to facilitate the Development. None of the existing trees at the front of the property were impacted by the Development and as such, were not discussed further within the AIA prepared and submitted to the LPA.

Proposed Ground Level Changes within the RPAs of Retained Trees

The greatest constraint to the Development is presented by the nominal RPAs of trees T1 (Category B) and T8 (Category C). No new permanent encroachment into the RPAs of these trees is to occur however, excavation of soils to account for the current, gentle slope, is likely, with a cut and fill assumed, along with a new, low retaining wall.

3. Implementation and Limitations of the AMS

3.1 Key Project Contacts

AMS Principal Author Details

3.1.1 This AMS has been prepared by Callum Throw *(N. Dip Arb, PTI, MArborA)* Managing Director and Principal Arboricultural Consultant at Arb Innovators. Callum is an experienced Arboricultural Consultant possessing over 15 years' experience within the arboricultural industry providing technical advice on arboricultural issues, with specialism in Urban Forestry and trees in relation to development.

Table 2 Key Contacts

Contact Name	Company	Role	Contact Number
Callum Throw	Arb Innovators Ltd	AMS Principal Author	07837 794373

3.1.2 The details provided within this AMS are a true and accurate reflection of both the Site conditions, as known, as well as the professional opinion of the Principal Author based on reviewing all information presented by the Client, as referenced in Table 1.

3.2 Construction Commitments

3.2.1 The details and requirements of this AMS include commitments to complete the construction phase in a specific manner. This AMS will inform the production of all relevant tender documents and contractor instructions. These commitments are essential to ensure the planning conditions can be discharged in full.

3.2.2 Failure to follow the correct sequence, manner, methods, and timing of operations outlined in this AMS may result in irreversible tree damage and eventual death, of retained trees protected by planning law. Irresponsible tree damage or removal may result in a stop notice or prosecution by the LPA.

3.3 Client and appointed Principal Contractor Responsibilities

3.3.1 The Client and/or their appointed Principal Contractor are responsible for ensuring that the Site works, and subsequent construction of the Approved Development follow the measures detailed within this AMS.

3.3.2 The Client is to appoint a suitably qualified arboriculturist to act as an Arboricultural Clerk of Works (ACoW). The ACoW will be engaged to monitor and oversee the implementation of protection measures and supervision of works within RPAs, where deemed necessary, as set out in this AMS.

3.3.3 The Client and/or Principal Contractor have a responsibility to ensure that works at the Site comply with current legislation in respect of protected trees, as well as to ensure that works at the Site comply with any planning obligations/conditions given.

3.3.4 The Client and/or Principal Contractor will be responsible for ensuring that all site personnel are made aware of the requirements of this AMS and that any future amendments are known and understood. The purpose of tree protection measures should be understood and well-considered from the start.

3.3.5 This AMS and the accompanying TPPs should be printed in full colour and kept on file.

3.4 Limitations of the AMS

3.4.1 The AMS is for the sole use of the Client and its reproduction or use by anyone else is forbidden unless written consent is given by the author.

3.4.2 This AMS is only concerned with arboricultural issues pertaining to the referenced location and referenced documentation outlined in Table 1.

3.4.3 The TPP has been produced without reference to a Topographical Survey. The positions of all trees are approximate only.

3.4.4 The correct sequence, manner, methods, and timing of operations outlined in this AMS are not absolute. The timetables outlined in Table 3 of this AMS are subject to change and are based on all preliminary information available at the time of writing. As a result, the AMS processes may need to be reviewed and modified as needed.

3.4.5 Any changes in ground level or excavations near tree roots that are not specified in this AMS may have a negative impact on the stability and physical condition of the retained trees, necessitating additional assessments and protection measures.

3.4.6 This is an AMS and as such no reliance should be given to comments relating to buildings, engineering, or soil. Further, this report does not consider ecological or archaeological issues, or any other matter beyond the assessment of the trees.

4. Summary of the Site Operations Requiring Arboricultural Input

4.1 Sequence of Works

4.1.1 Effective tree protection can only be achieved by adherence to a logical sequence of works combined with effective arboricultural monitoring. For this site, arboricultural input will be needed for the operations outlined in Table 3. The timing of these phases may be altered in accordance with any future changes to the construction programme, at which time, the AMS will be updated accordingly.

4.1.2 There are 2no. key phases, broadly summarised as:

- Installation of tree protection measures.
- Groundworks within the RPAs of retained trees including excavation of soils.

Table 3 Anticipated Phase of Works and Tree Protection Methodology

Phase/Timing	Trees Affected	Brief Summary of Works	Section/Appendix to Reference
Prior to any works commencing		**Pre-commencement Site meeting** between the Client, the Principal Contractor, and the appointed ACoW to agree protective measures, as described in this AMS. This can be an online meeting or a telephone call. Implement reporting process for all unforeseen arboricultural incidents and implement use of progress sheet to build up evidence base of good practice on-site.	4.4
Prior to any demolition works commencing	Trees T2, T3 and section of H1	**Fell to ground level and clear arising.** To be removed prior to the installation of onsite tree protection measures.	6.4
Prior to any Site works commencing	All retained arboricultural features	**Installation of Tree Protective Fencing (TPF)/Barriers and Temporary Ground Protection.** The appointed ACoW will request photographic evidence to ensure that all protection measures are in place as per the AMS.	6.1 and TPP at Appendix 3
		CONSTRUCTION OF THE EXTENSION	

Phase/Timing	Trees Affected	Brief Summary of Works	Section/Appendix to Reference
During construction	T1, T8	**Excavation of soils within northern extents of the RPA.** All works to be carried by hand, with **hand-digging only.** The appointed ACoW will be on hand to consult on the amount of disturbance the trees can tolerate, as recommended within BS5837:2012 clause 7.4.2.7 Note 1, and how best to deal with any arboricultural issues. The Client will provide the ACoW with photographic evidence demonstrating compliance with the AMS. **Pollution control measures.** Pollution control methods relevant to the project will include physical barriers (puncture resistance laminated composite construction with a HDPE core laminated, to a UV stabilised LDPE carrier layer) to contain spills and procedures for cleaning them up if they occur.	6.2, 6.3 and TPP at Appendix 3
Post-construction	All protected trees	**Remove TPF once construction works have been completed and there is no risk of damage to retained trees.** Annual post-construction tree inspection for a period of no less than 2 years.	6.1.2 and 4.5.6

4.2 Arboricultural Clerk of Works (ACoW)

4.3 The Role of an ACoW

4.3.1 The Client or appointed Principal Contractor will appoint a suitably qualified arboriculturist to act as an ACoW. The ACoW will be engaged to monitor and oversee the implementation of the works required.

4.3.2 The ACoW will:

- Be aware of their arboricultural responsibilities.
- Have the authority to stop any work that is causing or has the potential to cause harm to any retained tree.
- Be responsible for ensuring that all site operatives are aware of their responsibilities toward retained trees and the consequences of any failure to observe those responsibilities.

4.4 Pre-commencement Site Meeting

4.4.1 A Pre-commencement Site Meeting will be undertaken with the client, Project Team and the ACoW prior to any on-site works commencing. The purpose of this meeting will be to ensure that all aspects of the tree protection measures are clear and understood and that any future sequencing and supervisory arrangements are agreed. The details of this meeting will be recorded in writing so it can be circulated to all interested parties.

4.4.2 The following occasions are where consultation and ad hoc advice from the ACoW will be required:

- **Initial meeting** (usually referred to as the pre-commencement meeting) to discuss any required amendments with the client and representatives of the Project Team.
- **Audit the implementation and installation of tree protection measures** as outlined in this AMS at the key 2no. phases outlined in paragraph 4.1.2 and as indicated on the TPP provided.
- **Provide supervision of works, where necessary, during the excavation of soils within the RPAs of retained trees.** At a minimum, attend Site to obtain photographic evidence of compliance with the AMS.
- **Provide ad hoc support** for all unforeseen arboricultural incidents.

4.4.3 The ACoW will also be the first contact for arboricultural advice for any issues that arise that are not detailed in this AMS, such as additional tree works, work required within the RPA and CEZ of the trees on-site, any damage that has occurred to any of the retained trees, or any breach of the tree protection measures.

4.5 Progress Reporting

4.5.1 During construction works, a record of completion for the various tree protection measures will be kept between the Client and ACoW. This may include phone and email contact between both parties, periodic Site visits and direct monitoring of sensitive works.

4.5.2 This evidence will be provided to the Local Planning Authority upon request with sufficient evidence provided to demonstrate that all practicable steps have been taken to prevent damage to retained trees, thereby ensuring compliance with planning conditions imposed, as referenced.

Ongoing Toolbox Talks

4.5.3 The Client or Principal Contractor will be responsible for providing a toolbox talk to any on-site operatives following the meeting. The purpose of this toolbox talk will be to inform the operatives of how to ensure protection of all retained trees.

4.5.4 The toolbox will be repeated when new external trades/contractors commence work on site. The toolbox talk shall focus on informing contractors on the following topics:

- The protection of trees is a requirement of planning approval and failure to comply could result in in stop notices being applied or fines.
- How trees can be harmed on development sites.
- Discussion on methods of working near the trees as outlined in this Method Statement.
- How to report an issue before it becomes a problem.

4.5.5 Evidence of the toolbox being carried out shall be recorded.

Ongoing Arboricultural Monitoring of Retained Trees

4.5.6 Any trees that are to be retained and have the potential to be impacted by construction works should be routinely monitored both during and after construction.

4.5.7 The goal of arboricultural monitoring is to ensure that all tree protection measures are fit for purpose, that they are implemented in accordance with any approved details, and that any previously unforeseen arboricultural issues are quickly identified and appropriately addressed. This is particularly relevant where there is public access, as recommended in section 8.8.3 of BS5837:2012 - Post Development Management of Existing Trees, to satisfy the landowner's duty of care.

5. General Tree Protection Guidance

5.1 General Requirements and Protection Measures for Retained Trees

5.1.1 During construction, retained trees within influencing distance of the proposed works must be adequately protected. The tree-protection measures will adhere to the recommendations in BS5837:2012.

5.1.2 Typically, this protection will include the installation of mandatory tree protection barriers to the extent of the calculated Root Protection Areas (RPAs). When barriers are installed, the enclosed area is designated as a construction exclusion zone (CEZ). Barriers will be erected prior to the start of any demolition and/or construction work unless they already exist.

5.2 Tree Protection Fencing (TPF)

General Considerations

5.2.1 TPF and barriers are used to protect trees to be retained. The TPF will be robust enough to restrict being breached from the type of demolition and construction activity taking place on Site and suitable for the degree and proximity of works to retained trees.

5.2.2 TPF will be erected prior to any works onsite, including site clearance, groundwork (including uplift and removal of existing grey and green infrastructure and wearing course), or the importation of plant and materials, commence.

5.2.3 Once erected, the TPF will remain in-situ until all construction activities are complete. Barriers to be installed must be periodically inspected to ensure that they remain fit for purpose and, where required, maintained, or improved throughout the duration of demolition and construction activities on Site.

Establishing a Construction Exclusion Zone (CEZ)

5.2.4 For this project, the CEZ is defined as the areas of RPA which are to be fenced off, as demonstrated by an orange solid hatch on the TPP at Appendix 3.

5.2.5 The following must be carefully followed when planning site operations:

- No materials, machinery, temporary structures, chemicals, or fuel shall be stored within the CEZ.
- Excavations or increases in soil level are not permitted within the CEZ without prior written approval from the ACoW and acting LPA.
- It is critical to avoid injurious contact with retained trees with wide or tall loads or plants equipped with booms, jibs, and counterweights. Any plant transit or traverse near trees should be supervised by a banksman or similar, to ensure adequate clearance from trees is always maintained.
- Concrete mixing, diesel oil, and vehicle washing are examples of materials that should not be discharged within, or near to, the CEZ.
- Fires must not be lit in such a way that their flames can reach within 5m of foliage, branches, or a trunk/stem. Consideration should be given to the size of the fire and the direction of the wind.

5.3 Site Compounds, Portakabins, Containers, and other Temporary Structures

5.3.1 Site compounds, Portakabins, Containers, and other temporary structures must be sited away from trees. No materials or machinery will be stored within the RPA or CEZ.

5.3.2 Site compounds, Portakabins, Containers, and other temporary structures may be used in root protection areas in some cases if prior consent is obtained from the acting local planning authority. Prior to installation, the method for installing the buildings and an assessment of whether temporary ground protection is required must be agreed upon and specified with the project Arboriculturist.

5.3.3 Loads that are wide or tall should not encounter retained trees. Oil, bitumen, cement, or any other potentially hazardous material to trees should not be stacked or discharged within 10 metres of a tree stem. Concrete should not be mixed within 10 metres of a tree.

5.4 Installation of Underground Services and Utilities

5.4.1 No detailed service plans have been shared. If it becomes apparent that services are required inside the RPAs of retained trees, a more thorough study of the arboricultural impacts will be necessary, and the AMS will need to be amended accordingly.

5.5 Hard and Soft Landscaping

No formal proposal for both hard and soft landscaping has been provided at the time of writing this AMS.

6. Project Specific Tree Protection Measures and Requirements

6.1 Tree Protection Fencing and Temporary Ground Protection

TPF Specification

6.1.1 Reference should be made to the TPP at Appendix 3 of this AMS.

6.1.2 To protect the RPA's of retained trees throughout construction, a rigid wire mesh, metal fencing panel (Heras™ HSG151) should be used. For this project, it is considered appropriate to use rubber feet/blocks providing they are pinned in position with short (approx. 30cm) metal rebar or wooden stakes to prevent the fencing being moved or removed during construction.

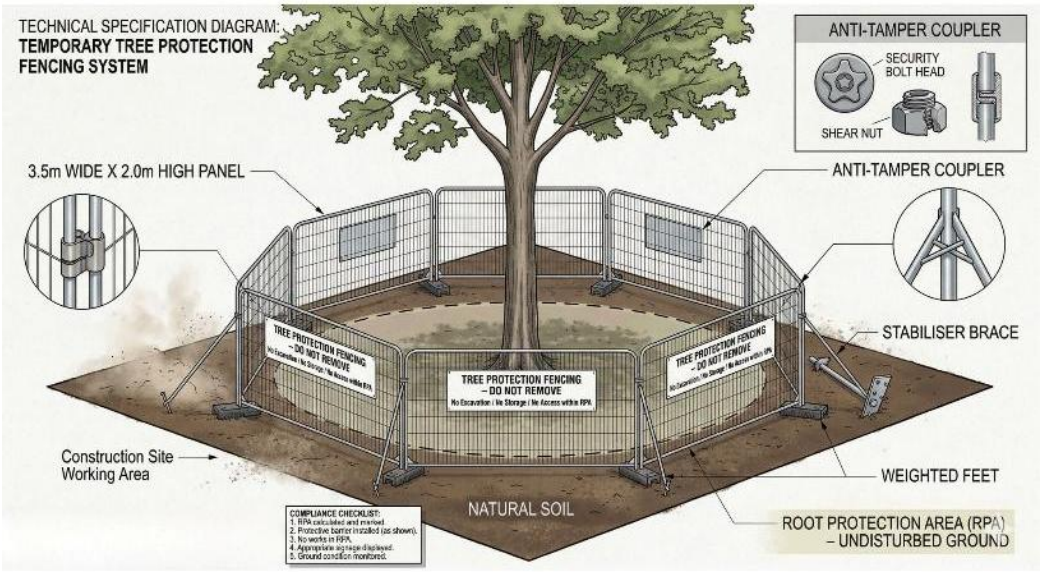

Figure 1 AI generated example of tree protective barriers

6.1.3 The fencing diagram shown in Figure 1 is provided for guidance only and does not supersede BS5837:2012. Protective barriers shall be installed and maintained in full accordance with BS5837:2012 Clause 6.2.2 and the relevant standard details (Figure 2 – default protective barrier and, where justified, Figure 3 – alternative/above-ground stabilising systems).

6.1.4 All-weather signs should be attached (provided alongside this AMS) to the protective fencing with the following “Construction Exclusion Zone - No Access”.

Temporary Ground Protection Specification

6.1.5 To construct the new extension, 2m of construction access will be necessary which will extend into the RPAs of trees T1 and T8.

6.1.6 The activity is limited to pedestrian movements and, where necessary, the erection of scaffolding. No plant or material storage is proposed in these areas. In accordance with BS5837:2012 Clause 6.2.3, the following temporary ground-protection measures shall be installed before scaffolding is erected and shall remain in place until external works are complete.

Table 4 Temporary Ground-Protection (TGP) Specification

Description	Minimum requirement	BS 5837 reference
Build-up option A – suspended walkway (preferred on soft ground)	Scaffold framework driven outside the RPA or founded on baseplates bearing through load-spreading timber beams; 38mm scaffold boards fixed on the frame to provide a continuous deck.	Clause 6.2.3.3(a) & Note a
Build-up option B – low-dig granular	Geotextile separation layer; 100mm depth clean woodchip or 50mm angular gravel (no fines) lightly tamped; over-laid with 18mm plywood or double scaffold boards laid at right-angles.	Clause 6.2.3.3(c)

Removing Tree Protection Fencing and Ground Protection Post-construction

6.1.7 Following the completion of construction works (post-development), the TPF and temporary ground protection measures will be carefully removed to avoid causing root disturbance. This can be carried out prior to soft landscaping works such as new tree and shrub planting, mulching and grass sowing.

6.2 Excavation/Remodelling of Soils within the RPA of trees T1 and T8

6.2.1 Excavation of soils outside the RPAs of retained trees may be undertaken using micro plant/mechanised equipment, subject to compliance with the Tree Protection Plan and avoidance of any designated Construction Exclusion Zones. Any ground remodelling within the RPAs of trees T1 and T8 shall be treated as authorised excavation and undertaken strictly in accordance with the methodology below

Working Methodology

1. Toolbox talk to all contractors as part of site inductions confirming RPA limits/working footprint, no-go areas, access routes, storage locations, and pollution controls.
2. TPF to be installed in accordance with the approved TPP prior to commencement of enabling works. Temporary ground protection shall be installed on access routes and working areas to prevent compaction from repeated traffic.
3. Mark out the excavation/remodelling footprint. Remove turf/surface vegetation by hand and store arisings/spoil outside the RPAs.
4. All excavation within RPAs shall be undertaken using hand-held tools (and/or compressed air excavation where appropriate). Use a careful “pull-back” approach. When hand-digging, use a fork to loosen soil to help locate substantial roots, and a small tool (e.g., trowel) to clear soil from around roots to avoid bark damage. No mechanical excavation within RPAs.

Note a. Any tree roots encountered which measure **<25mm diameter** may be cut cleanly using hand tools only (secateurs) and only where necessary. Roots should be pruned to a suitable side shoot. Wherever possible, as much rooting density as possible must be retained.

Note b. If tree roots are encountered that are **>25mm diameter** and with potential to be broken, stop excavation and consult the appointed ACoW. Any roots with a **diameter >25mm encountered, shall be left in situ** and should be immediately wrapped with wet hessian whilst the excavation is open to mitigate against root desiccation. The ACoW will photograph the nature and extent of the damage and then prune back any torn ends using a sharp tool (such as secateurs/pruning saw) removing as little as possible and leaving a neat cut that is as small as possible.

Note c. Where it is deemed that roots >25mm diameter cannot be severed, an alternative approach will be required.

5. Any exposed roots to be retained shall be protected from damage and desiccation (kept covered, e.g., damp hessian) and excavation shall be backfilled as soon as practicable.
6. Remove loose debris from the excavation. Backfill with suitable loose topsoil (or approved planting soil), placed carefully to avoid voids and without compaction; reinstate lawn/levels as specified (no rotavating within RPAs).
7. Soil contamination is to be always avoided. No storage/mixing of fuels, wet concrete, cement washings or chemicals within RPAs; spill kits to be available, and any spills to be contained and reported immediately, as set out in Section 6.3.

6.3 Pollution Control

6.3.1 Pollutants pose a risk of contaminating the RPAs of retained trees (included perceived rooting areas within the CEZ and soils beyond) during both demolition and construction works.

6.3.2 There is a risk if concrete leachate during:

- Construction of the extension.
- The installation of concrete footings and foundations.

6.3.3 Spilt solid or liquid chemicals that reach RPAs can kill existing roots and will result in long-term and potentially irreversible damage or death of trees. It is essential that measures are in place to minimise the risk of soil contamination.

6.3.4 Pollution control methods relevant to the project will include physical barriers (puncture resistance laminated composite construction with a HDPE core laminated, to a UV stabilised LDPE carrier layer) to contain spills and procedures for cleaning them up if they occur. The following methods will be employed:

- The use of bunding or a frame sealed with heavy-duty plastic sheeting sufficient to prevent contamination will be used to contain accidental spillages. This specifically applies to refuelling areas, cement mixing areas, and vehicle washing facilities.
- Where wet concrete is poured, an impermeable liner will be used to prevent contamination of the soil from any leachate and prevent spillage and contamination beyond the installation.
- When pouring concrete for new foundations within the RPA of T1, impermeable liners must be used to keep leachate from contaminating the soil after the installation.

- Pollution control measures will remain in place until there is no significant risk of perceived RPA contamination.

6.4 Tree Surgery and Tree Works

6.4.1 A preliminary specification of tree works is provided in Table 4.

Table 5 Tree Works Specification

Tree Reference No.	Description of Tree Works	Reason	BS5837:2012 Category	Statutory Constraints
T2 and T3	Fell to ground level	To facilitate the construction of the Proposed Development.	C1	None
H1	Partial removal of a section of the hedgerow	To facilitate the construction of the Proposed Development.	C2	None

6.4.2 All tree works undertaken must comply with *British Standard 3998:2010 – Tree Work Recommendations* and should therefore be carried out by skilled tree surgery contractors, ideally Arboricultural Association Approved Contractors.

6.4.3 Prior to any tree removal being carried out, due regard must be given to any legal restrictions on tree pruning. All vegetation and, particularly, woody vegetation proposed for clearance, must be removed outside of the bird-breeding season (March - September inclusive). Birds are protected under the Wildlife and Countryside Act, 1981 (as amended) whilst on the nest. If this is not practicable, a qualified Ecologist should inspect the vegetation to be removed or pruned for the presence of nesting birds.

6.4.4 Consideration should also be given to roosting bats which are protected by Regulation 43 of The Conservation of Habitats and Species Regulations 2017 (as amended).

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TREE SURVEY METHODOLOGY

APPENDIX 1

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BS5837:2012 Methodology

The tree survey was carried out with reference to the methodology set out in BS5837:2012 *'Trees in relation to design, demolition and construction – Recommendations'*.

The trees on the Site were originally surveyed without reference to site layout as detailed in paragraph 4.4.1.1 of BS5837:2012. However, for the purposes of the Arboricultural Impact Assessment the Proposed Development for the Site has been considered.

The survey includes all trees with an estimated stem diameter of 75mm or more measured at 1.5m above ground level that are located within the Site or that overhang the Site.

Trees were surveyed individually or as groups where it was considered that they had grown together to form cohesive arboricultural features either aerodynamically (trees that provide companion shelter), visually (e.g. avenues or screens) or culturally (including for biodiversity). However, where it was considered that there was an arboricultural need to differentiate between attributes trees within groups and / or woodlands were also surveyed as individuals.

Within the Tree Survey Schedule, each surveyed TREE (T), GROUP (G), HEDGEROW (H), WOODLAND (W). The tree numbers associated with each tree are cross referenced within the schedule and plans at Appendix 2 and 3 respectively. Metal tags have not been used for this survey as identification on-site does not require this.

Full details of the dimensions and measurements recorded including detailed definitions, can be found at Appendix 2.

Tree condition, health and structural integrity were inspected in accordance with the Visual Tree Assessment (VTA) method (Mattheck 2007), which provides a systematic framework for formal tree inspection, as summarised:

- VTA Stage 1 - Inspection of the tree for visual evidence of internal defects.
- VTA Stage 2 – Confirmation of defects and measuring their extent.
- VTA Stage 3 – Assessment of defects and estimation of residual strength.

Ancient Woodland, Ancient, Veteran and Notable trees

BS5837:2012 does not reference a methodology for identifying and recording ancient, veteran, or notable trees. While 'Veteran' is defined in paragraph 3.12 of BS5837:2012, neither 'Ancient' nor 'Notable' are mentioned. Due to the complexity and subjectivity of this subject, there are various methods for defining and classifying Ancient, Veteran, and Notable trees.

For this BS5837:2012 assessment, the methodology set out by the Woodland Trust (n.d.) (2024) Recognising and categorising ancient and other veteran trees has been adopted.

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TREE SURVEY
METHODOLOGY

BS5837:2012 Methodology

The Forestry Commission (FC) and Natural England (NE) have published guidance and recommendations to safeguard Ancient Woodland, Ancient, and Veteran trees against development. In summary this guidance advises on the use of semi-natural buffer zones as a means of protection with minimum distances identified as:

- Fifteen metres between any development and ancient woodland.
- Fifteen times the diameter of its stem or 5m from the edge of its canopy, if that's greater, around any ancient or veteran tree.

Stage 1: Tree Constraints & Feasibility Study - for most planning applications where there are trees on or adjacent to a site, an initial assessment of the tree population and tree constraints will be required. This should be instructed as early as possible in the planning process and includes:

- Tree Survey Schedule: Presents data collected during the tree survey which is made to identify & categorise all trees that may be impacted by a proposal.
- Tree Constraints Plan: Tree locations, retention categories and consideration of associated above and below ground constraints.
- Tree Constraints and Opportunities Assessment: A preliminary report written to inform the design and layout of future development of the site.

Stage 2: Arboricultural Impact Assessment & Outline Mitigation Measures. This will normally be required following a Stage 1 survey and report. Components will vary depending on design complexity, but may include:

- Arboricultural Impact Assessment (AIA): An assessment of the anticipated impact of the proposed development on the tree population (existing & proposed).
- Draft Tree Protection Plan (where appropriate): Indicative plan of tree protection measures.
- 'Heads of Terms' Arboricultural Method Statement: Outlines principles of the methodology required to mitigate impact on existing trees.

BS5837:2012 outlines guidance on how to assess an arboricultural feature's quality and advises on assessing both direct and indirect impacts. Neither a methodology for defining impacts nor specific criteria for determining an arboricultural feature's perceived sensitivity are provided.

Stage 3: Detailed Tree Protection & Discharge of Conditions. This is sometimes required following a Stage 2 report if the tree protection requirements are complex; or if there is a planning condition or reserved matters requirement to do so. The stage three report may include the following components:

- Detailed Tree Protection Plan (TPP).
- Arboricultural Method Statement (AMS): detailed methodology to include arboricultural supervision and site monitoring schedule (if required).

BS5837:2012 Methodology and RIBA Design Guidance

Stage 4: Arboricultural Supervision & Post-Construction. This may include:

- Written report as evidence of arboricultural supervision, site monitoring, reinstatement, and planting and aftercare (as required).

RIBA Design Guidance

The process is broken down to coordinate broadly with the key elements within both the RIBA Plan of Work (2013) and British Standard 5837:2012 as set out in the table below:

Information Stage	RIBA Stage	BS5837:2012
Stage 1: Tree Survey	2: Concept	4: Feasibility
Stage 2: Arboricultural Impact Assessment	3: Developed Design	5: Proposals
Sage 3: Arboricultural Method Statement and Tree Protection Plan	4: Technical Design	6: Technical Design
Arboricultural Supervision & Post-Construction.	5: Construction	7: Demolition and construction

A hierarchical methodology is implemented to optimise the utilisation of the site and the placement of built structures. The process is as follows:

Avoid: The initial step in Site layout design should seek to avoid the RPA of retained trees and ensure adequate clearance from above-ground constraints such as tree canopies.

Mitigate: Where intrusion within the RPA is unavoidable then its impact on the tree can be mitigated by specialist measures e.g. foundations that avoid trenching (screw piles, suspended floor slabs or casting at ground level for lightweight structures).

Compensate: replacement planting helps maintain continuous tree cover in cases where tree removal is necessary or preferred. In certain situations, off-site planting may be acceptable.

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BS5837 TREE SURVEY SCHEDULE

APPENDIX 2

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CORE SURVEY MEASUREMENTS

The core measurements taken and the standardised categories used to classify a tree's age, health and structural integrity are demonstrated below.

Tree Species
Common name (where available) followed by Scientific name.

Crown Spread
Given as an average diameter or measured using a distometer. North (N), east (E), south (S) and west (W).

Tree Height
Tree heights measured using a clinometer unless stated (*). Tree heights are given in metres (m) to the nearest half metre.

Young (Y)
Fast growth rate, apical dominance. < 1/3rd estimated life expectancy.

Semi-mature (SM)
Established specimen approaching 1/3 life expectancy.

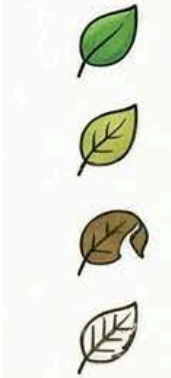
Early-mature (EM)
1/3 – 2/3 life expectancy, still increasing in height.

Mature (M)
Over 2/3 life expectancy. Full expected height, crown still spreading.

Over-mature (OM)
Increasing girth and hollowing, developing an irregular, complex crown structure.

Ancient (AT)
Centuries-long life stage, significant canopy retrenchment and increasing hollowing of bole

PHYSIOLOGICAL CONDITION (HEALTH AND VITALITY)



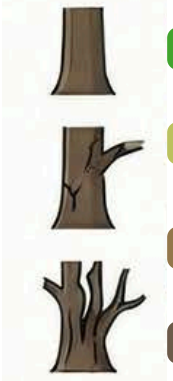
Good Generally in good vitality, characteristic of the species.

Fair Reasonable vitality with few signs or symptoms associated with ill-health, decline or fungal presence.

Poor Trees exhibiting symptoms of reduced vitality, ill-health or decline which are irremediable.

Dead Tree/s are dead, with no live growth.

STRUCTURAL CONDITION (INTEGRITY)



Good No obvious risk features or those of little overall significance.

Fair Identifiable but may remediable risk features. Possible confirmed presence of fungal fruiting bodies.

Poor Major risk feature of significance. Confirmed pathogenic decay fungi indicating presence of internal decay.

Dead Tree/s are dead, dying and have a severely compromised structural integrity.

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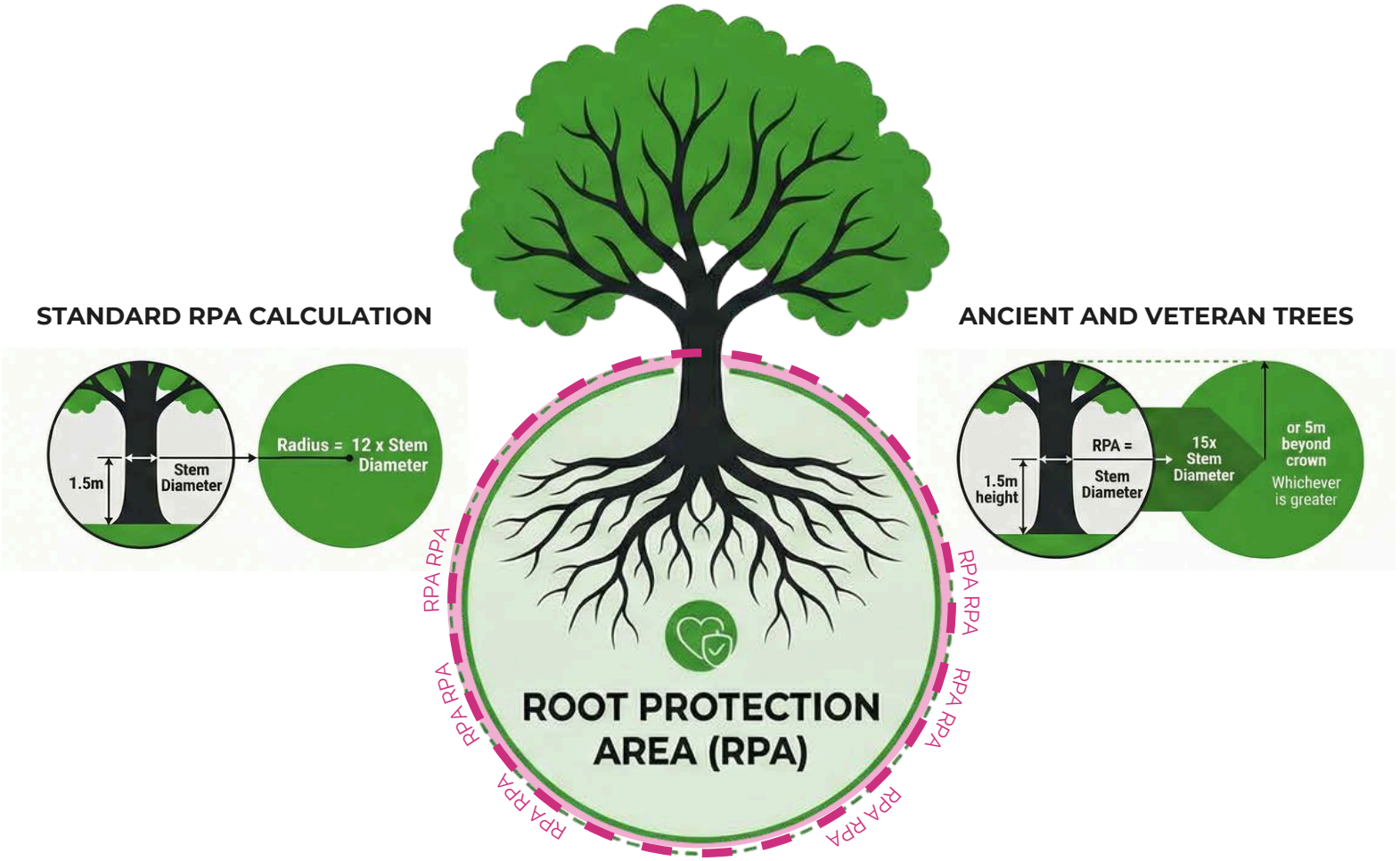
ROOT PROTECTION AREA (RPA) AND NOTES

A critical zone for protecting a tree's rooting environment during construction, as defined by BS5837:2012. For trees with more than one stem, one of two calculation methods should be used. In all cases, the stem diameter(s) should be measured in accordance with Annex C, and the RPA should be guided from Annex D of BS5837:2012.



Where veteran trees have been identified the RPA has been calculated in accordance with Natural England guidance i.e. 15x the stem diameter or 5m beyond the crown whichever is greater. An average stem diameter is provided for tree groups, wooded areas and hedges.

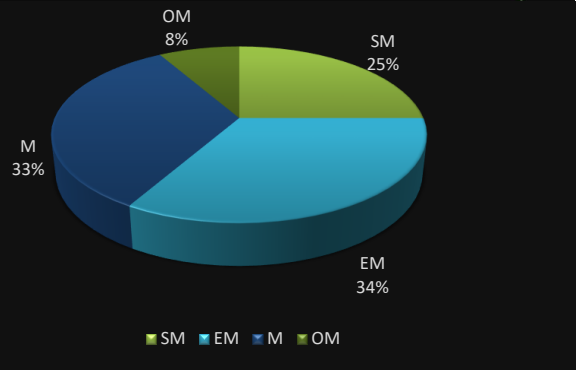
Both RPA radius in metres from the main stem and total area for the RPA as square metres are provided.

BS5837:2012 TREE SURVEY SCHEDULE

Survey Date: 29.08.2025

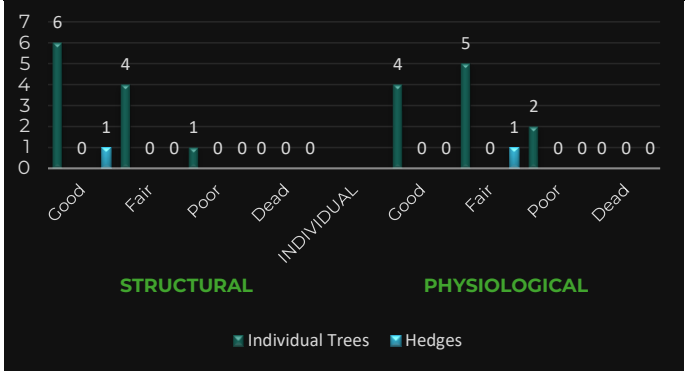
Age Distribution of the Tree Population.

The distribution of the tree populations age is useful for understanding expected longevity whch can help inform the BS5837 useful life expectancy, and help homeowners or property managers to make informed decisions on mitigation, tree management and replacement.



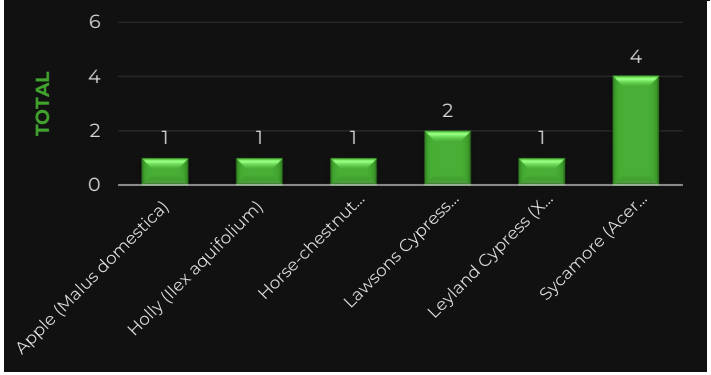
Distribution of Physiological and Structural Conditions across the Tree Population.

Physiological condition provides an indication of the vitality of the tree. Structural condition is related to the presence of defects that can lead to failures.



Species Composition of the Individual Tree Population.

The proportions of any given family, genus, species, and cultivar which make up the total individually recorded tree population across the Site.



Ancient Woodland and Ancient, Veteran and Notable Trees

Ancient Tree - A tree that has passed beyond maturity and is old, or aged, in comparison with trees of the same species. Characterised by biological, cultural, or aesthetic features of interest.

Ancient Woodland - Any wooded area that has been continuously wooded since 1600 AD

Veteran Tree - Exhibiting features of biological, cultural, or aesthetic value characteristic of species surviving beyond the typical age range.

Notable Tree - mature trees which may stand out in the local environment because they are large in comparison with other trees around them.

Forestry Commission and Natural England Guidance for the protection of ancient woodland, ancient trees and veteran trees from development and the use of semi-natural buffer zones:

- Fifteen metres between any development and ancient woodland.
- Fifteen times the diameter of its stem or 5m from the edge of its canopy, if that's greater, around any ancient or veteran tree.

ANCIENT WOODLAND	ANCIENT TREES	VETERAN TREES	NOTABLE TREES
0	0	0	0

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BS5837:2012 TREE SURVEY SCHEDULE

CATEGORY A	CATEGORY B	CATEGORY C	CATEGORY U
Trees with an estimated remaining contribution of at least 40 years. Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features.	Trees with an estimated remaining life expectancy of at least 20 years. Trees that might be included in category A, but are downgraded because of impaired condition or trees lacking the special quality necessary to merit the category A designation.	Trees with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm. Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.	Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
Sub-categories	Mainly arboricultural value **1**	Mainly landscape value **2**	Mainly cultural or conservation value **3**

Summary of Individual trees, Groups, Woodlands and Hedges			
	T1, T6, T7, T10	T2, T3, T4, T5, T8, T11, H1	T9
0	**4**	**7**	**1**

Estimated Remaining Contribution (ERC)			
> 40 years	**> 20 years**	**< 20 years**	**< 10 years**

Breakdown of Arboricultural Features for each BS5837:2012 Category							
Trees	**0**	Trees	**4**	Trees	**6**	Trees	**1**
Groups	**0**	Groups	**0**	Groups	**0**	Groups	**0**
Woodlands	**0**	Woodlands	**0**	Woodlands	**0**	Woodlands	**0**
Hedgerows	**0**	Hedgerows	**0**	Hedgerows	**1**	Hedgerows	**0**
Percentage of tree population	**0.0%**	Percentage of tree population	**33.3%**	Percentage of tree population	**58.3%**	Percentage of tree population	**8.3%**

In assigning the BS5837:2012 Category, particular consideration has been given to the presence of any structural defects for each feature, the size and form of each feature, its suitability within the context of a proposed development, and the location of each feature relative to existing site features e.g. its screening value or landscape amenity value.

INDIVIDUAL TREES																	
TREE NO.	TAG NO.	SPECIES (COMMON & SCIENTIFIC NAME)	HEIGHT (m)	NO. OF STEMS	STEM DIA (mm)	CROWN SPREAD (m) N	E	S	W	CROWN CLEAR (m)	AGE CLASS	PHYS COND	STRUC COND	ASSESSMENT OBSERVATIONS AND PRELIMINARY RECOMMENDATIONS	ESTIMATED REMAINING CONTRIBUTION (erc)	BS5837 CATEGORY	RPA (m^2)	RPA RADIUS (m)
T1	0	Sycamore (Acer pseudoplatanus)	18	1	860	6.5	6	6	3	5	M	Fair	Fair	Canopy full though some chlorosis noted. Side branches to E have been removed leaving wounds forming minor cavities. Area of bacterial canker on stem at 4m just above bole, see photo ; Asymmetric crown form, Branch socket cavities observed, Compacted ground at the base, Crown had been unsympathetically reduced, Epicormic growth evident within the crown.	20+	**B1**	334.6	10.3
T2	0	Lawsons Cypress (Chamaecyparis lawsoniana)	4	1	40	0	0.5	0.5	0.5	0	SM	Good	Good	Small cypress adjacent to building. Insignificant but adjacent to works ; Multi-stemmed from base ; Limited life span due to proximity to house.	10+	**C1**	0.7	0.5
T3	0	Holly (Ilex aquifolium)	2	1	50	0.5	1	1	0	0.5	SM	Good	Fair	Small pruned holly, cut to form dense crown to ground. Growing adjacent to wall and patio and one sided due to conifer hedge.	10+	**C1**	1.1	0.6
T4	0		5	1	190	2	0	2	2	2.5	EM	Good	Poor	Twin stem at 2m, included and suppressed stem leaning to west; Asymmetric crown form, Included bark union.	10+	**C1**	16.3	2.3
T5	0	Leyland Cypress (X Cuprocyparis leylandii)	6	1	260	1.5	1.5	1.5	1.5	0.5	EM	Good	Good	No obvious defects. Well pruned, including top.	20+	**C1**	30.6	3.1
T6	0	Lawsons Cypress (Chamaecyparis lawsoniana)	4.5	1	80	1	1	1	1	0.5	EM	Good	Good	No obvious defects. Well pruned including top.	20+	**B1**	2.9	1.0
T7	0	Sycamore (Acer pseudoplatanus)	16	1	580	5	3.5	5	5	5	M	Fair	Fair	Twin stemmed from 2.5m. ivy has been severed and now dead in crown. Basal wound exposing heartwood on N side, surface decay only and no evidence of fungi ; Cavity at base, Heartwood exposed.	20+	**B1**	152.2	7.0
T8	0	Horse-chestnut (Aesculus hippocastanum)	20	1	1000	7	4	7	8	4	OM	Fair	Fair	Off-site tree, forms the other half of T1 canopy. Tree has scars of bleeding canker on main stem visible above the hedge. Pruning wounds and cavities forming also noted.	10+	**C1**	452.4	12.0
T9	0	Sycamore (Acer pseudoplatanus)	16	1	860	4	9	4	4	3	M	Poor	Poor	Leaning stem to east, not more than 10degrees but increasing towards top. Severe dieback in upper crown. Likely caused by fungal pathogen but dense ivy at the base obscured inspection. ; Asymmetric crown form, Dieback of the crown observed.	<10	**U**	334.6	10.3

INDIVIDUAL TREES																
TREE NO.	TAG NO.	SPECIES (COMMON & SCIENTIFIC NAME)	HEIGHT (m)	NO. OF STEMS	STEM DIA (mm)	CROWN SPREAD (m) N	E	S	W	CROWN CLEAR (m)	AGE CLASS	PHYS COND	STRUC COND	ASSESSMENT OBSERVATIONS AND PRELIMINARY RECOMMENDATIONS	ESTIMATED REMAINING CONTRIBUTION (erc)	BS5837 CATEGORY	RPA (m^2)	RPA RADIUS (m)
T10	0	Sycamore (Acer pseudoplatanus)	18	1	580	3	4	4	5	5	M	Good	Good	Cut ivy on main stem. No major defects noted.	20+	**B1**	152.2	7.0
T11	0	Apple (Malus domestica)	4	1	70	3	3	2.5	2.5	2	EM	Fair	Fair	Typical garden apple tree, no major obvious defects ; Crossing and rubbing branches, Multi leadered form from crown break.	20+	**C1**	2.2	0.8

HEDGES																	
TREE NO.	TAG NO.	SPECIES (COMMON & SCIENTIFIC NAME)	MIN HEIGHT (m)	MAX HEIGHT (m)	NO. OF STEMS	STEM DIA (mm)	CROWN SPREAD (m) N	E	S	W	CROWN CLEAR (m)	AGE CLASS	PHYS COND	STRUC COND	ASSESSMENT OBSERVATIONS AND PRELIMINARY RECOMMENDATIONS	ESTIMATED REMAINING CONTRIBUTION (erc)	BS5837 CATEGORY	RPA (m^2)	RPA RADIUS (m)
H1	0	{Leyland Cypress (X Cuprocyparis leylandii)}	2.5	3	1	75	0.5	0.5	0.5	0.5	0	SM	Good	Fair	Maintained hedge. Typical cypress hedge.	40+	**C2**	2.5	0.9

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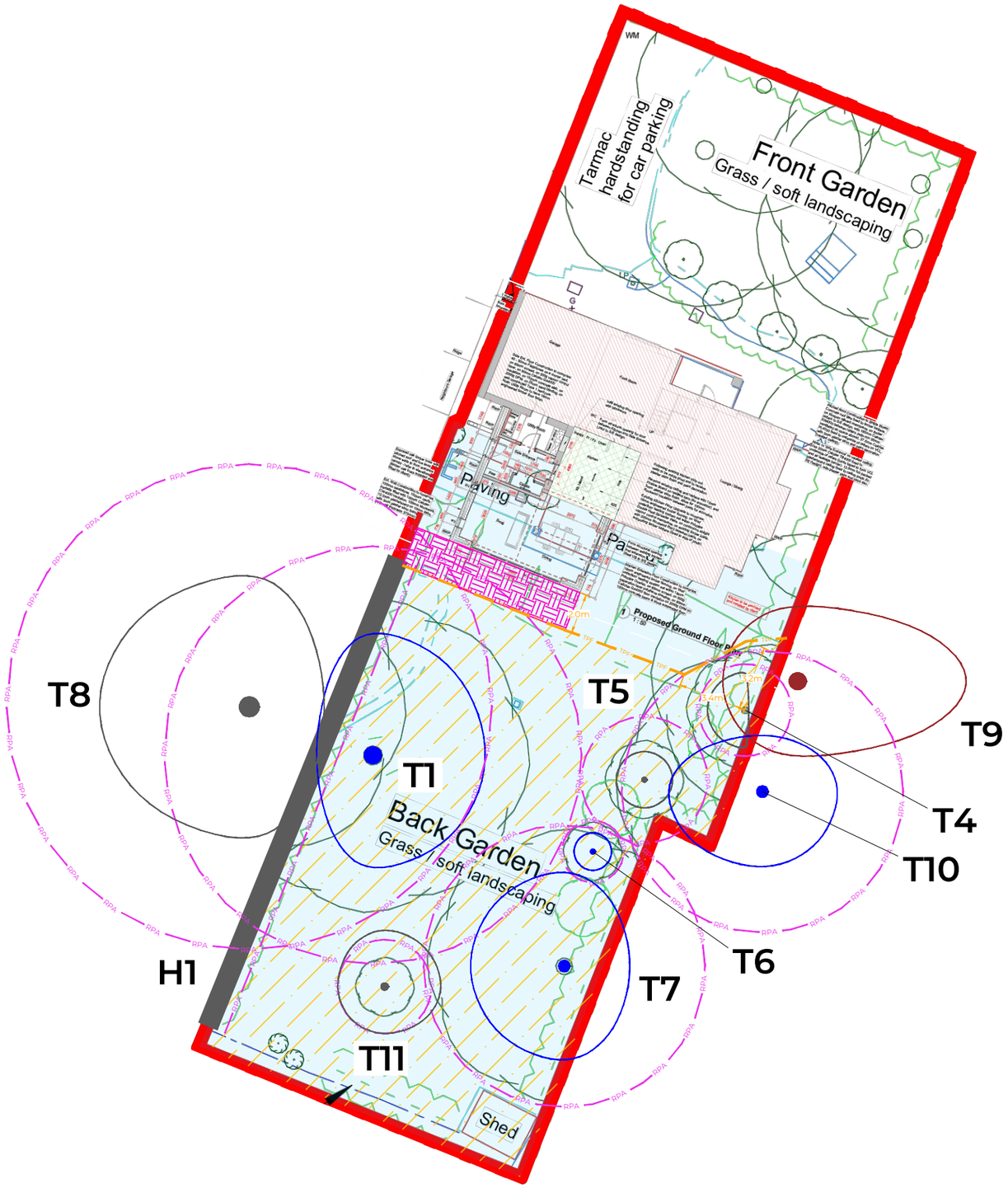
ARBORICULTURAL PLANS

APPENDIX 3

#WEAREINNOVATORS



ARBORICULTURAL FEATURES.

*Crown colour in accordance with BS5837:2012 Category. *In accordance with Ancient and other Veteran Trees: Further Guidance on Management.*

Individual Trees ("T" Prefix)

- Indicative shade
- Crown spread
- Tree Stem
- Root Protection Area (RPA)

Ancient and Veteran Trees

- Indicative shade
- Crown spread
- Tree Stem
- Root Protection Area (RPA)*

CLIENT. David Houltby

PROJECT NAME. The Beeches, Halifax Road, Thurgoland

PROJECT NO. 1126

NOTES.

This Tree Protection Plan (TPP) should be viewed in conjunction with the accompanying BS58372012 Tree Survey Schedule and Arboricultural Method Statement (AMS) prepared by Arb Innovators Ltd.

All dimensions should be checked on site. No dimensions are to be scaled from this drawing. This drawing was produced in colour - a monochrome copy should not be relied upon. This drawing was produced digitally using a combination of GIS, GPS and Topographical base mapping (.dxf) where provided. Arb Innovators Ltd cannot be held responsible for inaccuracies in the base drawing in which this plan is based.

DRAWING TITLE. Tree Protection Plan

DRAWING NO. 260305 ARBI 1126 TPP V1

REVISION NO. 1

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DRAWN BY. CTT
DRAWN.

APPROVED BY. CTT
05.03.2026

SCALE AND BEARING.

N

Scale 1:250 @ A3

0 5 10 15m

BS5837:2012 CATEGORIES

In accordance with Table 1 – Cascade chart for tree quality assessment

- Category B (Moderate Quality)
- Category C (Low Quality)
- Category U (Unsuitable for Retention)

SITE FEATURES AND EXISTING CONSTRAINTS

- Red Line Boundary
- Arboricultural Study Area

TREE PROTECTION AND MITIGATION

- Tree Protection Fencing (and annotation)
- Construction Exclusion Zone (CEZ)
- Temporary Ground Protection

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TREE PROTECTION FENCING

SIGNAGE

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TREE PROTECTION AREA

NO ACCESS - TREE PROTECTION AREA

NO MATERIALS, MACHINERY, TEMPORARY STRUCTURES OR CHEMICALS SHALL ENTER OR BE STORED WITHIN THIS AREA. FENCING WILL NOT BE ALTERED OR MOVED WITHOUT PRIOR AGREEMENT OF THE PROJECT ARBORICULTURIST.

THIS FENCING MUST REMAIN IN PLACE AND BE MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS FOR THIS DEVELOPMENT.

TREES ENCLOSED ARE PROTECTED BY PLANNING CONDITIONS AND/OR TREE PRESERVATION ORDERS (TPO). CONTRAVENTION OF A TPO MAY LEAD TO CRIMINAL PROSECUTION.

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